

Remarks

Applicants respectfully request reconsideration of the present U.S. Patent application as amended herein. No claims have been amended, added or canceled. Thus, claims 1-37 are pending.

Claim Rejections - 35 U.S.C. § 103(a)

Claims 1-37 were rejected as being unpatentable over U.S. Patent No. 5,539,466 issued to Igarashi, et al. (*Igarashi*) in view of U.S. Patent No. 5,801,778 issued to Ju (*Ju*). For at least the reasons set forth below, Applicants submit that claims 1-37 are not rendered obvious by *Igarashi* and *Ju*.

In responding to the above rejections, Applicants rely in part upon the opinion of the Board of Patent Appeals and Interferences in Ex parte Jeffrey S. McVeigh and Michael Keith, Appeal No. 2003-0812 and Application No. 09/274,147 (August 20, 2004)¹. This Board opinion is discussed below in regards to the *Ju* Reference. A copy of this opinion is provided in an accompanying Information Disclosure Statement.

Applicants assert that the Office has failed to make a *prima facie* case of obviousness because the combined references fail to teach or suggest at least one limitation common to the independent claims. MPEP § 2141.03.

Claim 1 recites:

¹ Both the 09/274,147 Application and the current application claim priority to non-provisional application no. 09/101,251 by Michael Keith for a "Simplified Predictive Encoder" filed on December 11, 1998, and to provisional application no. 60/080,501 by Jeffrey McVeigh and Michael Keith for a Method and Apparatus for Providing Real-Time MPEG-2 Image Processing", filed April 2, 1998. Each recites that each of the foregoing provisional applications are commonly assigned to Intel Corporation of Santa Clara, CA.

utilizing even-parity field prediction to **unidirectionally** predict content of each of a plurality of fields of the predicted frame from corresponding fields of **only the temporally closest anchor frame**, wherein the unidirectionally predicted frame comprises **a frame that is defined as a bi-directionally predicted frame according to an encoding protocol for the stream of data.** (Emphasis supplied).

Claim 1 recites performing **only** unidirectional prediction using “**only** the temporally closest anchor frame” (Emphasis supplied) to predict each of the fields of a frame that is “defined as bi-directionally predicted” by an encoding protocol. The only-unidirectional-prediction limitation of claim 1 arises not just from the words “unidirectionally predict,” but also from wording that prediction be performed using, “**only** the temporally closest anchor frame.” A frame that is predicted using only a single frame (e.g., “**only** the temporally closest anchor frame”) is by necessity only unidirectionally predicted.

Thus, claim 1 unambiguously recites doing only “unidirectional” prediction, using “only the temporally closest anchor frame,” of a “frame that is defined as a bi-directionally predicted frame.” Neither of the cited references, either individually or together, teaches or suggests at least the above limitation of claim 1.

The above limitation is not taught or suggested by *Igarashi*. As the Office notes, unidirectional prediction is discussed at col. 10, lines 58-67 of *Igarashi*. (May 9, 2006 Office Action, p. 3, lines 1-2). However, that cited passage of *Igarashi* only discusses unidirectional prediction of a “P frame or P Picture.” (*Igarashi*, col. 10, lines 61-62). Nothing therein teaches or suggests that a P-frame is “defined as a bi-directionally predicted frame” by an encoding protocol. The Office conceded in its previous office action that *Igarashi* does not teach unidirectional prediction of a frame defined as bi-

directionally predicted. (Sept. 20, 2005 Office Action, p. 3, first paragraph). Therefore, the cited discussion of P-frames does not teach or suggest at least the above limitation.

The only types of frames discussed by the cited passage of *Igarashi* as being bi-directionally predicted are a “B frame or B picture.” (*Igarashi*, col. 10, line 63). However, this statement in *Igarashi* merely restates the conventional view of B-frames. It does not defy the conventional view and discuss only unidirectional prediction of B-frames using “only the temporally closest anchor frame.” Thus, *Igarashi*’s discussion of B-frames does not teach or suggest performing only unidirectional prediction, using “only the closest temporal frame,” of a frame “defined as a bi-directionally predicted frame.”

The Office cites Figures 7-12 of *Igarashi* as teaching prediction using “only a closest anchor frame in the stream of data.” (May 9, 2006 Office Action, p. 3, line 4). Figures 10(A) and 10(B) do appear to show unidirectional prediction of P frames – but nothing teaches or suggests that the depicted P-frames are defined as bi-directionally predicted. Figures 7, 8 and 11 show only conventional bi-directional prediction of B frames. None of the cited figures shows performing only unidirectional prediction, using only the temporally closest anchor frame, of a frame defined as a bi-directionally predicted frame. Thus, the cited portions of *Igarashi* do not teach or suggest at least the above-discussed limitation.

Turning to *Ju*, the Office cites col. 2, lines 20-25 as describing prediction of B-frames. (May 9, 2006 Office Action, p. 3). This cited portion of *Ju* merely restates the conventional view that B-frames may be bi-directionally predicted or unidirectionally predicted. However, neither the cited passage nor the rest of *Ju* col. 2 discusses

performing only unidirectional prediction of B-frames using only the temporally closest anchor frame.

The Office also cites step 135 of Figure 3, as teaching unidirectional prediction after completion of an ME2 search. (May 9, 2006 Office Action, p. 3). However, neither step 135 of Figure 3 nor the discussion of step 135 at col. 13, lines 10-30 discuss performing only unidirectional prediction using only the temporally closest anchor frame. Thus, the cited portions of *Ju* do not teach at least that limitation.

Applicants' view of *Ju* is supported by the above-cited decision of the Board of Patent Appeals and Interferences in Ex parte Jeffrey S. McVeigh and Michael Keith, Appeal No. 2003-0812 and Application No. 09/274,147 (August 20, 2004). In this decision the Board found that, "Although we agree with the examiner that *Ju* teaches a frame-based encoding technique, **we do not agree with the examiner that *Ju* discloses an encoding technique in which the content of each B-frame is unidirectionally predicted from a temporally closest anchor frame.**" (Board Decision, p. 5) (Emphasis supplied).

Thus, *Igarashi* in view of *Ju* neither teaches nor suggests at least claim 1's limitation of performing only unidirectional prediction, using only the temporally closest anchor frame, of a frame that is defined as a bi-directionally predicted frame by an encoding protocol. The final Office Action therefore fails to present a *prima facie* case of obviousness. MPEP § 2141.03 (All limitations must be taught or suggested).

All of the remaining independent claims 12, 18, 20, 30, and 31 have very similar or identical limitations regarding performing only unidirectional prediction, using only the temporally closest anchor frame, of a frame that is defined as a bi-directionally

predicted frame by an encoding protocol. Therefore, they are also patentable over *Igarashi* in view of *Ju* for the reasons discussed above.

Dependent claims 2-11, 13-17, 19, 21-29, 32-37 incorporate all the limitations of at least one of the above patentable independent claims. This includes the limitation regarding performing only unidirectional prediction, using only the temporally closest anchor frame, of a frame that is defined as a bi-directionally predicted frame by an encoding protocol. Because *Igarashi* in view of *Ju* fails to teach or suggest at least this limitation, these claims are also patentable over those references. MPEP § 2141.03 (Dependent claims are patentable over a reference when the reference does not teach or suggest all limitations of the independent claim).

By relying on MPEP § 2141.03 with respect to the dependent claims, Applicants do not acquiesce in the specific rejections, but instead continue to assert that the dependent claims are independently patentable.

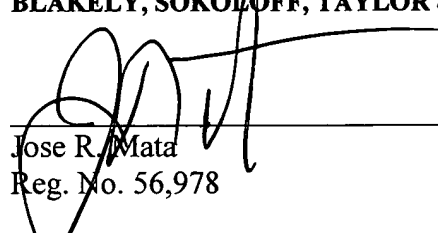
CONCLUSION

For at least the foregoing reasons, Applicants submit that the rejections have been overcome. Therefore, claims 1-37 are in condition for allowance and such action is earnestly solicited. The Office is respectfully requested to contact the undersigned by telephone if such contact would further the examination of the present application. Please charge any shortages and credit any overcharges to our Deposit Account number 02-2666.

Respectfully submitted,
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Date: _____

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Gayle Bekish

6/12/2006

Date